PROSTAGLANDINS LEUKOTRIENES AND ESSENTIAL FATTY ACIDS

EDITORS

D. F. Horrobin

Efamol Research Institute Kentville Nova Scotia

M. S. Manku

Efamol Research Institute Kentville Nova Scotia

P. Sirois

Centre Hospitalier Universitaire Sherbrooke Quebec Canada

P. Borgeat

Centre Hospitalier de l'Université Laval Quebec Canada

Vol. 42, 1991

Churchill Livingstone
Edinburgh London Melbourne New York and Tokyo

© Longman Group UK Ltd 1991

ISSN 0952-3278

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, photocopying, recording or otherwise, without either the prior written permission of the publishers (Churchill Livingstone, Robert Stevenson House, 1–3 Baxter's Place, Leith Walk, Edinburgh EH1 3AF), or a licence permitting restricted copying in the United Kingdom issued by the Copyright Licensing Agency Ltd, 33–34 Alfred Place, London, WC1E 7DP.

Printed in Great Britain by Bell and Bain Ltd, Glasgow

Volume Contents

VOLUME 42 Review Lipo-prostaglandin preparations 1 Y. Mizushima Eicosanoid release and early changes in two acute non specific inflammatory reactions. Major role of prostacyclin and leukotrienes 7 M. Tissot, D. Pham Huy, M. Roch-Arveiller, J. Mathieu and J. P. Giroud Arachidonic acid metabolites in pregnant rat uterus 15 W. Gu and G. E. Rice Inactivation of thromboxane synthase with hydroperoxy-fatty acids 19 E. R. Hall, G. Townsend and K. F. Frasier-Scott The renal excretory activity of atrial natriuretic factor is independent of renal prostaglandins in humans 23 S. Castellani, A. Del Rosso, J. L. Chen, A. Camaiti, M. Carnovali and G. Masotti Substrate inactivation of lung thromboxane synthase preferentially decreases thromboxane A2 production 31 E. R. Hall, G. L. Townsend, D. S. Linthicum and K. F. Frasier-Scott The effects of alcoholism and smoking on platelet eicosanoid production 39 E. A. Burch, P. J. Kadowitz, S. Kotler-Cope and D. B. McNamara Phenobarbital increases rat hepatic prostaglandin $F_{2\alpha}$, glutathione S-transferase activity and oxidative stress 45 S. Hendrich, S. K. Krueger, H.-W. Chen and L. Cook Effect of a novel 5-lipoxygenase inhibitor, E6080 on bronchospasm, airway cellular infiltration and leukotriene production in guinea pigs 51 H. Tsunoda, S. Katayama, Y. Sakuma, S. Tanaka, K. Tsukidate, S. Abe, I. Yamatsu and K. Katayama 57

The effect of indomethacin on colony-stimulating-factor production by		
th	e lung	
A.	Rabbani, M. Vedadi, B. Goliaei and M. Boojar	

Free radical generation, lipid peroxidation and essential fatty acids in patients	
with septicemia	6
P. Sunia Prahha II N. Das G. Ramash K. Vijay Kumar and V. Kamalakar	

1. Surya Flabria, G. 14. Das, G. Harricon, N. Vijay Karriar and V. Karriarakar	
The alterations of leukotriene C4 and prostaglandin E3 levels following	
different ischemic periods in rat brain tissue	67
S. Aktan, C. Avkut, S. Oktav, B. Yegen, F. Keles, I. Avkao and S. Ercan	

S. Aktan, C. Aykut, S. Oktay, B. Yegen, E. Keles, I. Aykao and S. Ercan	
Acetyl eugenol, a component of oil of cloves (syzygium aromaticum L.) inhibits aggregation and alters arachidonic acid metabolism in human blood platelets K. C. Srivastava and N. Malhotra	7:

Monthly Prostaglandin Bibliography prepared by the University of S	Sheffield
Biomedical Information Service	

Review	
Lipocortins: an update	83
F. Russo-Marie	

Production of urinary 11-keto-thromboxane B ₂ in normal and hypertensive pregnancies Y. Tannirandorn, M. H. F. Sullivan and M. G. Elder	91
Sulfidopeptide leukotrienes contribute to human alveolar macrophage activation in asthma C. Chavis, P. Godard, F. B. Michel, A. Crastes de Paulet and M. Damon	95
Prolonged corticosteroid treatment exerts transient inhibitory effect on prostaglandin E ₂ release from rabbit's eyes N. Naveh and C. Weissman	101
Different changes of n-6 fatty acids and lipoproteins from hyperlipemic subjects after diets supplemented with n-3 fatty acids P. Singer, M. Wirth and H. Kretschmer	107
Effects of eicosapentaenoic acid and arachidonic acid on incorporation and metabolism of radioactive linoleic acid in cultured human fibroblasts R. Takahashi, M. E. Begin, G. Ells and D. F. Horrobin	113
Effect of chronic alcohol consumption on rat uterine spontaneous motility, prostaglandin production and triglyceride metabolism M. A. Chaud, E. T Gonzalez, A. M. Franchi, J. Fernandez Pardal, A. L. Gimeno and M. A. F. Gimeno	119
Disturbances of essential fatty acid- and prostaglandin E-mediated immunoregulation in atopy B. C. Melnik, G. Plewig and T. Tschung	125
Ultrastructural localization of arachidonic acid in stimulated macrophages A. Sandra and B. S. Mishra	131
Reevaluation of the Cottbus reinfarction study with 30 mg aspirin per day 4 years after the end of the study W. Hoffman, M. Nitschke, J. Muche, W. Kampe, W. Handreg and W. Förster	137
Notices	141
Monthly Prostaglandin Bibliography prepared by the University of Sheffield Biomedical Information Service	
Review Triple signal transduction model for the mechanism of PGE ₂ actions in rabbit cortical collecting duct R. L. Hébert, H. R. Jacobson and M. D. Breyer	143
Possible involvement of delta-6-desaturase in control of melanoma growth by gamma-linolenic acid N. S. Gardiner and J. R. Duncan	149
Endothelin-1 stimulates prostaglandin $F_{2\alpha}$ release from human endometrium I. T. Cameron, A. P. Davenport, M. J. Brown and S. K. Smith	155
Differences between in vivo and in vitro production of eicosanoids following long-term dietary fish oil supplementation in the rat M. Y. Abeywardena, P. L. McLennan and J. S. Charnock	159
Prostaglandin production by amnion and decidual cells in response to bacterial products M. D. Mitchell, R. J. Romero, C. Avila, J. T. Foster and S. S. Edwin	167
Formation of epoxyeicosatrienoic acids from arachidonic acid by cultured rat aortic smooth muscle cell microsomes	171

Prostaglandin versus expectant management in early tubal pregnancy C. Egarter, H. Kiss and P. Husslein	177
Effect of the leukotriene LTD ₄ /LTE ₄ antagonist, SR 2640, in ulcerative colitis: an open clinical study O. H. Nielsen, I. Ahnfelt/Rønne, M. K. Thomsen, A-M Kissmeyer and E. Langholz	181
Inhibition by iloprost of the contractile effect of noradrenaline in mesenteric artery rings: evidence for a possible calcium-dependent mechanism E. Demirel and R. K. Türker	185
Down-regulation of prostaglandin $F_{2\alpha}$ receptors in rat liver during chronic endotoxemia I. V. Deaciuc and J. A. Spitzer	191
Effect of dietary calcium on renal prostaglandins S. Katayama, Y. Maruno, A. Itabashi, M. Inaba, S. Akabane, K. Tanaka, K. Tanaka, M. Shibuya, S. Kawazu, J. Ishii, R. Kusuhara, T. Wakabayashi and Y. Kagawa	197
Monthly Prostaglandin Bibliography prepared by the University of Sheffield Biomedical Information Service	
Metabolism of arachidonic acid in neutrophils from alloxan-diabetic rabbits N. J. Greco, M. M. Milks and R. V. Panganamala	201
Sequential release of eiconsanoids during endotoxin-induced shock in anesthetized pigs T. Mózes, F. J. Zijlstra, J. P. C. Heiligers, P. R. Saxena and I. L. Bonta	209
The biosynthesis of the 3-series prostaglandins in rat uterus after alpha-linolenic acid feeding: mass spectroscopy of prostaglandins E and F produced by rat uteri in tissue culture H. A. Leaver, A. Howie and N. H. Wilson	217
Gas chromatographic-mass spectrometric analysis of lipoxygenase products in post-ischemic rabbit myocardium H. Hughes, D. L. Gentry, G. M. McGuire and A. A. Taylor	225
$PGF_{2\alpha}$ synthesis in isolated cerebellar glomeruli: effects of membrane depolarization, calcium availability and phospholipase activity $R.\ V.\ Dorman$	233
Arachidonic acid as a mediator of some of the actions of phorbolmyristate acetate, a tumor promoter and inducer of differentiation U. N. Das	241
The effects of evening primrose oil, safflower oil and paraffin on plasma fatty acid levels in humans: choice of an appropriate placebo for clinical studies on primrose oil D. F. Horrobin, K. M. Ells, N. Morse-Fisher and M. S. Manku	245
Triacylglycerol lipase mediated release of arachidonic acid for prostaglandin synthesis in rabbit kidney medulla microsomes Y. Fujimoto, S. Shimada, T. Fujikawa, S. Sakuma and T. Fujita	251
Immunosuppression by seminal plasma from fertile and infertile men: inhibition of natural killer cell function correlates with seminal PG concentration R. W. Kelly, A. J. Quayle, E. M. Wallace, F. C. W. Wu, T. B. Hargreave and K. James	257
Mechanisms involved in the stimulation by cycloheximide of prostaglandin production in the guinea-pig uterus J. S. Matthews and N. L. Poyser	261

Subject Index	267
Author Index	271
Volume Contents	

